

SEQUENCE LISTING

<110> Flasinski, Stanislaw

<120> Methods for Using Artificial Polynucleotides and Compositions thereof to Reduce Transgene Silencing

<130> 11899.0235.PCUS00

<140> PCT/US 03/21551

<141> 2003-07-10

<150> US 06/396,665

<151> 2002-07-18

<160> 35

<170> PatentIn version 3.3

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Ile	Gly	Gly	Leu	Pro	Gly	Gly	Lys	Val	Lys	Leu	Ser	Gly	Ser	Ile	Ser	
225					230					235					240	
Ser	Gln	Tyr	Leu	Ser	Ala	Leu	Leu	Met	Ala	Ala	Pro	Leu	Ala	Leu	Gly	
				245					250						255	
Asp	Val	Glu	Ile	Glu	Ile	Ile	Asp	Lys	Leu	Ile	Ser	Ile	Pro	Tyr	Val	
			260					265					270			
Glu	Met	Thr	Leu	Arg	Leu	Met	Glu	Arg	Phe	Gly	Val	Lys	Ala	Glu	His	
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Ser	Asp	Ser	Trp	Asp	Arg	Phe	Tyr	Ile	Lys	Gly	Gly	Gln	Lys	Tyr	Lys	
	290					295					300					
Ser	Pro	Lys	Asn	Ala	Tyr	Val	Glu	Gly	Asp	Ala	Ser	Ser	Ala	Ser	Tyr	
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Phe	Leu	Ala	Gly	Ala	Ala	Ile	Thr	Gly	Gly	Thr	Val	Thr	Val	Glu	Gly	
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Cys	Gly	Thr	Thr	Ser	Leu	Gln	Gly	Asp	Val	Lys	Phe	Ala	Glu	Val	Leu	
			340					345					350			
Glu	Met	Met	Gly	Ala	Lys	Val	Thr	Trp	Thr	Glu	Thr	Ser	Val	Thr	Val	
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Asp Val Asn Met Asn Lys Met Pro Asp Val Ala Met Thr Leu Ala Val	
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Val Ala Leu Phe Ala Asp Gly Pro Thr Ala Ile Arg Asp Val Ala Ser	
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Trp Arg Val Lys Glu Thr Glu Arg Met Val Ala Ile Arg Thr Glu Leu	
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Thr Lys Leu Gly Ala Ser Val Glu Glu Gly Pro Asp Tyr Cys Ile Ile	
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Thr Pro Pro Glu Lys Leu Asn Val Thr Ala Ile Asp Thr Tyr Asp Asp	
	450 455 460
His Arg Met Ala Met Ala Phe Ser Leu Ala Ala Cys Ala Glu Val Pro	
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Val Thr Ile Arg Asp Pro Gly Cys Thr Arg Lys Thr Phe Pro Asp Tyr	
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Phe Asp Val Leu Ser Thr Phe Val Lys Asn	
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 <212> DNA  
 <213> Zea mays

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 <212> DNA  
 <213> Zea mays

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tcgcagtacc	tgagtgcctt	gcttatggcg	gcccctctgg	ctctgggaga	cgtcgaaatt	780
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 <211> 76  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 11

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			20					25					30		
Ser	Leu	Lys	Thr	Gln	Gln	His	Pro	Arg	Ala	Tyr	Pro	Ile	Ser	Ser	Ser
		35					40					45			
Trp	Gly	Leu	Lys	Lys	Ser	Gly	Met	Thr	Leu	Ile	Gly	Ser	Glu	Leu	Arg
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65					70					75					

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 <211> 228  
 <212> DNA  
 <213> Arabidopsis thaliana

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 cgagcttata cgatttcgtc gtcgtgggga ttgaagaaga gtgggatgac gttaattggc 180  
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<210> 13  
 <211> 228  
 <212> DNA  
 <213> Arabidopsis thaliana

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<210> 14  
 <211> 228  
 <212> DNA  
 <213> Arabidopsis thaliana

<400> 14  
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 agggcctacc ctatcagctc atcctggggc ctcaagaaga gtggcatgac gctgatcggc 180  
 agcgagctgc ggccactcaa ggtgatgtcc tcggtctcaa cggcgtgc 228

<210> 15  
 <211> 455  
 <212> PRT  
 <213> Agrobacterium tumefaciens

<400> 15

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Arg	Ser	Phe	Met	Phe	Gly	Gly	Leu	Ala	Ser	Gly	Glu	Thr	Arg	Ile	Thr	35	40	45	
Gly	Leu	Leu	Glu	Gly	Glu	Asp	Val	Ile	Asn	Thr	Gly	Lys	Ala	Met	Gln	50	55	60	
Ala	Met	Gly	Ala	Arg	Ile	Arg	Lys	Glu	Gly	Asp	Thr	Trp	Ile	Ile	Asp	65	70	75	80
Gly	Val	Gly	Asn	Gly	Gly	Leu	Leu	Ala	Pro	Glu	Ala	Pro	Leu	Asp	Phe	85	90	95	
Gly	Asn	Ala	Ala	Thr	Gly	Cys	Arg	Leu	Thr	Met	Gly	Leu	Val	Gly	Val	100	105	110	
Tyr	Asp	Phe	Asp	Ser	Thr	Phe	Ile	Gly	Asp	Ala	Ser	Leu	Thr	Lys	Arg	115	120	125	
Pro	Met	Gly	Arg	Val	Leu	Asn	Pro	Leu	Arg	Glu	Met	Gly	Val	Gln	Val	130	135	140	
Lys	Ser	Glu	Asp	Gly	Asp	Arg	Leu	Pro	Val	Thr	Leu	Arg	Gly	Pro	Lys	145	150	155	160
Thr	Pro	Thr	Pro	Ile	Thr	Tyr	Arg	Val	Pro	Met	Ala	Ser	Ala	Gln	Val	165	170	175	

Lys Ser Ala Val Leu Leu Ala Gly Leu Asn Thr Pro Gly Ile Thr Thr  
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 Val Ile Glu Pro Ile Met Thr Arg Asp His Thr Glu Lys Met Leu Gln  
 195 200 205  
 Gly Phe Gly Ala Asn Leu Thr Val Glu Thr Asp Ala Asp Gly Val Arg  
 210 215 220  
 Thr Ile Arg Leu Glu Gly Arg Gly Lys Leu Thr Gly Gln Val Ile Asp  
 225 230 235 240  
 Val Pro Gly Asp Pro Ser Ser Thr Ala Phe Pro Leu Val Ala Ala Leu  
 245 250 255  
 Leu Val Pro Gly Ser Asp Val Thr Ile Leu Asn Val Leu Met Asn Pro  
 260 265 270  
 Thr Arg Thr Gly Leu Ile Leu Thr Leu Gln Glu Met Gly Ala Asp Ile  
 275 280 285  
 Glu Val Ile Asn Pro Arg Leu Ala Gly Gly Glu Asp Val Ala Asp Leu  
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 Arg Val Arg Ser Ser Thr Leu Lys Gly Val Thr Val Pro Glu Asp Arg  
 305 310 315 320  
 Ala Pro Ser Met Ile Asp Glu Tyr Pro Ile Leu Ala Val Ala Ala Ala  
 325 330 335  
 Phe Ala Glu Gly Ala Thr Val Met Asn Gly Leu Glu Glu Leu Arg Val  
 340 345 350  
 Lys Glu Ser Asp Arg Leu Ser Ala Val Ala Asn Gly Leu Lys Leu Asn  
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 Gly Val Asp Cys Asp Glu Gly Glu Thr Ser Leu Val Val Arg Gly Arg  
 370 375 380  
 Pro Asp Gly Lys Gly Leu Gly Asn Ala Ser Gly Ala Ala Val Ala Thr  
 385 390 395 400  
 His Leu Asp His Arg Ile Ala Met Ser Phe Leu Val Met Gly Leu Val  
 405 410 415  
 Ser Glu Asn Pro Val Thr Val Asp Asp Ala Thr Met Ile Ala Thr Ser  
 420 425 430  
 Phe Pro Glu Phe Met Asp Leu Met Ala Gly Leu Gly Ala Lys Ile Glu  
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 Leu Ser Asp Thr Lys Ala Ala  
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<210> 16

<211> 1368

<212> DNA

<213> Agrobacterium tumefaciens

<400> 16

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gcgagcgggtg aaacgcgcac caccggcctt ctggaaggcg aggacgtcat caatacgggc	180
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<210> 17

<211> 1368

<212> DNA

<213> Agrobacterium tumefaciens

<400> 17

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gctagtggag agacgagaat cactggtttg cttgagggcg aagatgttat caacaccggg	180
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<210> 18  
 <211> 1368  
 <212> DNA  
 <213> Agrobacterium tumefaciens

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taagtccata	tcccaccggg
cgttcatggt	cggcgggtct
	120
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cacgggcctg	cttgaagggtg
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agcgcgtatc	cgcaaggaag
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cccagggtcaa	gtcagccgtg
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tccgggcatc	accacgggtga
tcgagcccat	catgaccagg
	600

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<210> 19

<211> 183

<212> PRT

<213> *Streptomyces hygroscopicus*

<400> 19

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Thr	Val	Asn	Phe	Arg	Thr	Glu	Pro	Gln	Glu	Pro	Gln	Asp	Trp	Thr	Asp
		35					40					45			
Asp	Leu	Val	Arg	Leu	Arg	Glu	Arg	Tyr	Pro	Trp	Leu	Val	Ala	Glu	Val
	50				55						60				
Asp	Gly	Glu	Val	Ala	Gly	Ile	Ala	Tyr	Ala	Gly	Pro	Trp	Lys	Ala	Arg
65					70				75					80	
Asn	Ala	Tyr	Asp	Trp	Thr	Ala	Glu	Ser	Thr	Val	Tyr	Val	Ser	Pro	Arg
			85					90					95		
His	Gln	Arg	Thr	Gly	Leu	Gly	Ser	Thr	Leu	Tyr	Thr	His	Leu	Leu	Lys
			100				105						110		
Ser	Leu	Glu	Ala	Gln	Gly	Phe	Lys	Ser	Val	Val	Ala	Val	Ile	Gly	Leu
		115					120					125			
Pro	Asn	Asp	Pro	Ser	Val	Arg	Met	His	Glu	Ala	Leu	Gly	Tyr	Ala	Pro
	130					135					140				

Arg Gly Met Leu Arg Ala Ala Gly Phe Lys His Gly Asn Trp His Asp  
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Val Leu Pro Val Thr Glu Ile  
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<210> 20  
 <211> 552  
 <212> DNA  
 <213> Streptomyces hygroscopicus

<400> 20  
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 <212> DNA  
 <213> Streptomyces hygroscopicus

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 <212> DNA  
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<210> 25  
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<220>  
 <223> DNA Primer molecule

<400> 25  
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<210> 26  
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<210> 27  
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 <223> Motif providing glyphosate resistance to a plant EPSPS

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<210> 35  
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 <212> DNA  
 <213> Agrobacterium tumefaciens

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